

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

Group Art Unit: Unknown

Kenneth Johnson et al.

Examiner: Unknown

Application No.: NEW

**INFORMATION DISCLOSURE
STATEMENT**

Filed: HEREWITH

For: METHOD OF MEASURING MESO-
SCALE STRUCTURES ON WAFERS121 Spear Street, Suite 290
San Francisco, CA 94105
(415) 512-1312

M/S PATENT APPLICATION
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Applicant(s) submit(s) herewith patents, publications or other information [attached hereto and listed on the attached Form PTO-1449 (modified)] of which they are aware, which they believe(s) may be material to the examination of this application and in respect of which there may be a duty to disclose in accordance with 37 CFR § 1.56.

This Information Disclosure Statement:

- (a) accompanies the new patent application submitted herewith. 37 CFR § 1.97(a).
- (b) is filed within three months after the filing date of the application or within three months after the date of entry of the national stage of a PCT application as set forth in 37 CFR § 1.491.
- (c) as far as is known to the undersigned, is filed before the mailing date of a first Office Action on the merits, or before a first office action after filing a Request for Continued Examination under §1.114.
- (d) is filed after the first office action and more than three months after the application's filing date or PCT national stage date of entry filing but, as far as is known to the undersigned, prior to the mailing date of either a final rejection or a

notice of allowance, whichever occurs first, and is accompanied by either the fee (\$180) set forth in 37 CFR § 1.17(p) or a certification as specified in 37 CFR § 1.97(e), as checked below.

(e) is filed after the mailing date of either a final rejection or a notice of allowance, whichever occurred first, and the Issue Fee has not been paid, and is accompanied by the fee (\$130) set forth in 37 CFR § 1.17(i)(1) and a certification as specified in 37 CFR § 1.97(e), as checked below. This document is to be considered as a petition requesting consideration of the information disclosure statement.

[If either of boxes (d) or (e) is checked above, the following "certification" under 37 CFR § 1.97(e) may need to be completed.] The undersigned certifies that:

(f) Each item of information contained in the information disclosure statement was cited in a communication mailed from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this information disclosure statement.

(g) No item of information contained in this information disclosure statement was cited in a communication mailed from a foreign patent office in a counterpart foreign application or, to the knowledge of the undersigned after making reasonable inquiry, was known to any individual designated in 37 CFR § 1.56(c) more than three months prior to the filing of this information disclosure statement.

A list of the patent(s) or publication(s) is set forth on the attached Form PTO-1449 (Modified).

A copy of the items on PTO-1449 (Modified) is supplied herewith:

(h) each (i) none (j) only those listed below:

Those patent(s) or publication(s) which are marked with an asterisk (*) in the attached form PTO-1449 (Modified) are not supplied because they were previously cited by or submitted to the Office in a prior application no. 09/999,410, filed October 21, 2001, and application no. 09/735,286, filed December 11, 2000, and relied upon in this application for an earlier filing date under 35 U.S.C. § 120.

A concise explanation of relevance of the items listed on form PTO-1449 (Modified) is:

(k) not given

- (l) given for each listed item
- (m) given for only non-English language listed item(s) [Required]
- (n) is in the form of an English language copy of a Search Report from a foreign patent office, issued in a counterpart application, which refers to the relevant portions of the references [copy attached].

The Examiner is reminded that a "concise explanation of the relevance" of the submitted items "may be nothing more than identification of the particular figure or paragraph of the patent or publication which has some relation to the claimed invention," MPEP § 609.

While the information and references disclosed in this Information Disclosure Statement may be "material" pursuant to 37 CFR § 1.56, it is not intended to constitute an admission that any patent, publication or other information referred to therein is "prior art" for this invention unless specifically designated as such.

In accordance with 37 CFR § 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 CFR § 1.56(a) exists. It is submitted that the Information Disclosure Statement is in compliance with 37 CFR § 1.98 and MPEP § 609 and the Examiner is respectfully requested to consider the listed references.

Respectfully submitted,

STALLMAN & POLLOCK LLP

Dated: July 16, 2003

By:


Michael A. Stallman
Reg. No. 29,444

Attorneys for Applicant(s)

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| INFORMATION DISCLOSURE CITATION <i>(Use several sheets if necessary)</i> | Docket Number (Optional) TWI-30261 | Application Number NEW |
| | Applicant(s) Kenneth Johnson et al. | |
| | Filing Date HEREWITH | Group Art Unit Unknown |

U.S. PATENT DOCUMENTS

| *EXAMINER INITIAL | REF | DOCUMENT NUMBER | DATE | NAME | CLASS | SUBCLASS | FILING DATE |
|-------------------|-----|-----------------|------------|------------------|-------|----------|-------------|
| | *AA | 4,053,232 | 10/11/1977 | Dill et al. | 250 | 225 | 04/28/1975 |
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FOREIGN PATENT DOCUMENTS

| REF | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUBCLASS | TRANSLATION | |
|-----|-----------------|------|---------|-------|----------|-------------|----|
| | | | | | | YES | NO |
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OTHER DOCUMENTS *(Including Author, Title, Date, Pertinent Pages, Etc.)*

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| | *AK | W. Kong et al., "A Hybrid Analysis of Ellipsometry Data from Patterned Structures," <i>American Institute of Physics, 1-56396-967-X/01, Characterization and Metrology for ULSI Technology: 2000 International Conference, 2001</i> , pp. 373-377. |
| | *AL | M.E. Lee et al., "Analysis of Reflectometry and Ellipsometry Data from Patterned Structures," <i>International Conference on Characterization and Metrology for ULSI Technology, Gaithersburg, MD, March 23-27, 1998, AIP Conference Proceedings 449</i> , pp. 331-5, 1998, pp. 1-5. |
| | *AM | W. Kong et al., "Analysis of Time-Evolved Spectroscopic Ellipsometry Data from Patterned Structures for Etching Process Monitoring and Control," paper 19.2, SRC TECHCON, Las Vegas, Nevada, September 9-11, 1998, 4 pages in length. |
| | *AN | P.A. Heimann, "Optical Etch-Rate Monitoring Using Active Device Areas: Lateral Interference Effects," <i>J. Electrochem. Soc.</i> , Vol. 132, No. 8, August 1985, pp. 2003-2006. |
| | *AO | P.A. Heimann et al., "Optical Etch-Rate Monitoring: Computer Simulation of Reflectance," <i>J. Electrochem. Soc.</i> , Vol. 131, No. 4, April 1984, pp. 881-885. |
| | *AP | H.L. Maynard et al., "Multiwavelength ellipsometry for real-time process control of the plasma etching of patterned samples," <i>J. Vac. Sci. Technol. B</i> , Vol. 15, No. 1, Jan/Feb 1997, pp. 109-115. |

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|---|-----------------|
| Examiner | Date Considered |
| Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. | |